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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,154	03/29/2001	Neil G. Jacobson	X-777 US	8118

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XILINX, INC  
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EXAMINER

CRAIG, DWIN M

ART UNIT PAPER NUMBER

2123

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/823,154

Applicant(s)

JACOBSON, NEIL G.

Examiner

Dwin M Craig

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 5, 17 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-16, 18-25, 27 and 28-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. **Claims 1-4, 6-16, 18-25, 27 and 28** have been presented for reconsideration in light of Applicant's arguments and amended claim language. **Claims 29-35** have been presented for Examination. **Claims 5, 17 and 26** are cancelled.

#### Response to Arguments

2. The Arguments presented in Applicants response dated 12-13-2004 have been fully considered. The Examiner's response is as follows.

2.1 Regarding Applicants response to the Examiners rejections of **Claims 1-28** under the Judicially created doctrine of obviousness-type double patenting.

Applicant argued, *on page 9 of the 12-13-2004 response,*

*Non-statutory double patenting by the applications is not shown because the office action simply recites portions of the preambles of the claims in each application, without analysis of the differences in the limitations in the bodies of the claims.*

The Examiner has found Applicant's argument to be persuasive and withdraws the earlier double-patenting rejections of the claims.

2.2 Regarding Applicants response to the 35 U.S.C. 103(a) rejections of Claims 1-15 and 17-27.

Applicant argued *on page 10 of the 12-13-2004 response,*

*"...the independent claims are amended to include the reconfiguration controller, for example, as in claim 5."*

AND...

*"...this portion of Guccione neither teaches nor suggests the claimed configuration of the PLD based on the output signals from the device."*

Art Unit: 2123

AND...

*"...for example, the access controller that is configured to be embedded with an electronic system. It is respectfully submitted that neither Badzmirowski nor Guccione is shown to suggest this feature."*

The Examiner has found these arguments presented by the Applicant to be persuasive and withdraws the earlier 35 U.S.C. 103(a) rejections of claims 1-15 and 17-27.

**2.3** An updated search has revealed new art.

### **Double Patenting**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**3. Claims 1-4, 6-16, 18-25, 27 and 28-35** are provisionally rejected under the judicially created doctrine of double patenting over **Claims 1-20** of copending **Application No.**

**09/968,439**. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application

Art Unit: 2123

since the referenced copending application and the instant application are claiming common subject matter, as follows:

**3.1** For Example, **Claim 1** of U.S. Patent Application 09/968,439 claims, “*a diagnostic software system operating within a remote electronic device where the software system includes one or more software components*” **Claim 1** of U.S. Patent Application 09/823,154 claims, “*A diagnostic device for diagnosing a programmable logic device that is embedded in an electronic system*”. It would have been obvious, to one of ordinary skill in the art, at the time the invention was made to have used the diagnostic software system of the 09,968,439 application to be used to program the programmable logic device and control the diagnostic device as claimed in the 09/823,154 application.

**3.2** **Claim 1** of U.S. Patent Application 09/823,154 further claims, *from a limitation in the body after the preamble*, “a diagnostic control module configured to be embedded within an electronic system and transmitting diagnostic signals via the access controller to the programmable logic device.” *From a limitation in the body of Claim 1* is disclosed, “a diagnostic controller for controlling diagnostics of the software system the diagnostic controller instructing the remote electronic device to replace a selected software component of the software system with a diagnostic software component.” And further in dependent **Claim 8** is disclosed, “...wherein the diagnostic controller further includes logic for issuing reconfiguration instructions causing the electronic device to reconfigure characteristics of a hardware component...” These two disclosed limitations from the two pending Patent Applications describe the same system of a remote diagnostic controller sending configuration instructions, or

*in this case a serial eeprom image for reconfiguring and FPGA*, in order to test that same FPGA/programmable device/electronic device.

**3.3** Further, the 09/823,154 application claims a *diagnostic device*. The 09/968,439 application claims, *A diagnostic system...operating within a remote electronic device*. The Examiner asserts that there is no functional difference between these two claimed limitations.

**3.4** Further, where the 09/823,154 applications independent **Claim 1** claims, *the diagnostic control module including logic for collecting output signals generated by the programmable logic device in response to the diagnostic signals*, is functionally equivalent to the claim language in the 09/968,439 application where, *trace logic that collects diagnostic data while operating with the software system* is claimed.

**3.5** The Examiner respectfully asserts that the requirements of the MPEP (804 (II) (B) (1)) have been made clear, specifically in regards to limitations presented in the body of Applicant's claims. *Specifically*, sections **3.2, 3.3 and 3.4** of this section clearly show the differences between the inventions defined by the conflicting claims- *in this case* a claim in a pending Application and a claim in a co-pending Application. Further, the Examiner explains why an artisan of ordinary skill would conclude that the invention defined in the claim at issue is an obvious variation of the invention defined in a claim of a co-pending Application.

*Explanation:* The embedded software architecture, with the explanation of its functionality in the claimed structure of the remote device having a diagnostic test being performed, requires the embedded hardware architecture using a programmable hardware device disclosed in the claims of the pending Patent Application in order to function. Argued in the inverse, the embedded hardware architecture using a programmable hardware device requires an

Art Unit: 2123

embedded software architecture that allows remote reconfiguration of the programmable device in order to perform the diagnostic software actions as is being claimed.

*Expressed in another manner*, the software architecture of the 09/968,439 Application suggests the hardware architecture of the 09/823,154 Application.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Independent **Claims 1, 13, 23, 29 and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kolchinsky U.S. Patent 5,535,406** in view of **Aldebert et al. U.S. Patent 5,794,033**.

4.1 As regards independent **Claim 1** for example, the *Kolchinsky* reference discloses a diagnostic device (**Col. 3 Lines 25-30** *a means for fault detection is functionally equivalent to a diagnostic means*), and a configuration controller coupled to a configuration memory for the

Art Unit: 2123

purposes of testing a plurality of Programmable Logic Circuits (**Figures 3 & 7 specifically, items 32 and 33**), the reconfiguration controller for the programmable logic device reconfigures the programmable logic device based on signals generated by the programmable logic device while being tested (**Col. 3 Lines 3-31, Col. 5 Lines 25-34**).

However, the *Kolchinsky* reference does not expressly disclose an access controller, specifically for accessing and controlling the diagnostic device through a network connection as enabled by Applicant's specification.

An artisan of ordinary skill, given the requirements to be able to maintain and upgrade products that have been deployed and further, to take advantage of the internet communications technology, would be motivated to find methods to update and test Programmable Logic Devices over the internet without having to physically visit the location where the electronic device is located.

The *Aldebert et al.* reference discloses a method and apparatus for programming a plurality of Programmable Logic Devices remotely over a communications network using the functional equivalent of an access controller (**Figure 2, Col. 3 lines 52-64, note the phrase, "remote control means" this is functionally equivalent to an "access controller"**) and (**Col. 3 lines 29-39 note "on-line updating"**).

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to couple the "remote control means" disclosed in the *Aldebert et al.* reference with the "diagnostic means" disclosed in the *Kolchinsky* reference because, being able to remotely change the configuration of a Programmable Logic Device and performing testing and diagnostics of the same device and artisan would be able to update and maintain a plurality



Art Unit: 2123

of electronic devices from a single location and not have to travel to these locations when a device failure occurred.

**Allowable Subject Matter**

**4.2** Claims 2-4, 6-12, 14-16, 18-22, 24, 25, 27, 28, 30, 31, 33-35 are objected to as being dependent upon a rejected base claim, and being rejected under the judicially created doctrine of Non-statutory Double Patenting, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

**5.** Claims 1-4, 6-16, 18-25, 27 and 28 have been presented for reconsideration in light of Applicant's arguments and amended claim language. Claims 29-35 have been presented for Examination. Claims 5, 17 and 26 are cancelled. Claims 1-4, 6-16, 18-25, 27 and 28-35 have been rejected.

**5.1** This Office Action is **Non-Final**.

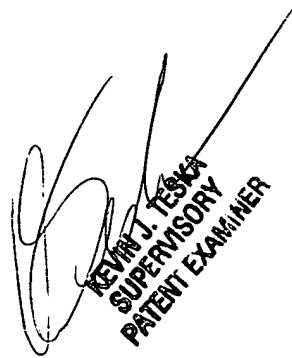
**5.2** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwain M Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on (571)272-3716. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2123

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC



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